NOTES ON THE HOST PLANTS OF SOME ADULT AUSTRALIAN WEEVILS (COLEOPTERA: CURCULIONIDAE)

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Abstract

Observations on the host plants of 24 Australian weevil species (Curculionidae) are reported.

Introduction

The weevils (Coleoptera: Curculionidae) are very well represented in Australia. Despite their distribution within a wide range of habitats very little is known about the biology of most Australian species. Lea (1905, 1927) reports observations on the host plants and life histories of a number of species, some of which have gained economical importance as pests. He also notes interesting cases of species which originally fed on Australian native plants but became pests on crops. Some weevils attack plants of horticultural interest (Froggatt 1904), while other exotic species e.g. *Cyrtobagous salviniae* Calder and Sands, have been utilised as biological control agents against noxious plants (Room et al. 1981, Forno 1981).

The present study presents observations on host plants of adult weevils. It is known that European *Apion* species spend most of their lives on their larval host plants. However, sometimes weevils are also found on other vegetation (Dieckmann 1977). To account for this, records given here have not been based on single specimens unless stated otherwise. Neighbouring vegetation has always been examined carefully for presence of each species.

It has been possible to compare those weevils described by Lea with the types. The remainder was determined by comparing with named specimens lodged in the South Australian Museum Collection and the Australian National Insect Collection, Canberra. For identification of the plants, standard textbooks have been used (e.g. Beadle 1982, Beadle et al. 1986, Costermans 1985, Williams 1984). In most cases plant material has been compared to named specimens in the Canberra National Botanic Gardens and in one case to material lodged in the herbarium of the CSIRO, Canberra.

Plant Associations

Apion congestum Lea

Several specimens on *Commersonia bartramia* (L.) Merr. (Sterculiaceae) near Murwillumbah, NSW, 21. xii. 1986.

Apion microscopicum Lea

A large number of specimens observed on *Pomaderris aspera* Sieb. ex DC. (Rhamnaceae) in the Brindabella Ranges near Canberra, ACT, 7. iii. 1987 and 10 km north of Batemans Bay, NSW, 8. iii. 1987.

Apion striatipenne Lea and
Apion tenuistriatum Lea

Both species very common together on *Doryphora sassafras* Endl. (Monimiaceae) on the Saddleback Mountain and at other similar rainforest localities near Kiama, NSW, 8. ii. 1987 and 16. iii. 1987.

Apion turbidum Lea

Abundant on *Spyridium spathulatum* (F. Muell.) Benth. (Rhamnaceae) on the hills near Adelaide, SA, 14. v. 1986.

Apion vertebrale Lea

Considerable numbers observed on *Rulingia pannosa* R. Br. (Sterculiaceae) in the Australian National Botanic Gardens, Canberra, ACT, 5. iii. 1987. Also on another unidentified *Rulingia* sp. in the Warrumbungle National Park near Coonabarabran, NSW, 2. i. 1987, where many of the capsules of the *Rulingia* sp. had 1-2 holes (diameter about 1.3 mm) and seeds were partly eaten. Single freshly developed specimens were taken from inside several capsules. At the latter locality an unidentified *Apion*, very similar to *A. vertebrale*, was found on the same plant.

Several unidentified *Apion* species were found on various *Pomaderris* spp. (Rhamnaceae), *Spyridium* spp. (Rhamnaceae), and on *Commersonia fraseri* J. Gay (Sterculiaceae). Most were reddish brown in colour with a more or less conspicious transverse band of hairs or scales on the elytra.

Pachyura australis Hope

On *Hakea microcarpa* R. Br. (Proteaceae) in montane areas (1300-1600 m) of the Brindabella Ranges near Canberra, ACT, 10. i. 1987, and Kosciusko National Park, NSW, 8. iii. 1986.

Acalonoma pusilla Blackburn

Common on *Goodenia ovata* Sm. (Goodeniaceae) at Durras near Batemans Bay, NSW, 22. ii. 1986, 25. v. 1986, and Eden, NSW, 27. iv. 1986. The foliage of this plant was sometimes perforated by feeding adults.

Euthyphasis acuta Pascoe

On *Goodenia ovata* Sm. at Durras near Batemans Bay, NSW, 22. ii. 1986, 25. v. 1986. Sometimes this species occurred together with the preceding on the same plants, but was less abundant.

Chrysolophus spectabilis (Fabricius)

The larvae of this species feed in the wood of *Acacia* spp. (Britton 1970). The beetle has regularly been found on different *Acacia* spp. in Canberra, ACT, mostly during summer. On one occasion (1. iii. 1986), just after sunset, a male and a female were observed feeding on a globular gall caused by a fungus (*Uromycladium* sp.) on a branch of *Acacia armata* R. Br.. On the next day half of the gall (diameter about 2 cm) had disappeared.

Iptergonus cionoides (Pascoe)

Abundant on *Leptospermum phylicoides* (A. Cunn. ex Schau.) Cheel (Myrtaceae) at Tharwa near Canberra, ACT, 21. iii. 1987.

Balanerhinus problematicus Lea

On and inside the fruit of *Alectryon coriaceus* (Benth.) Radlk. (Sapindaceae) at Broken Head Nature Reserve near Ballina, NSW, 30. xii. 1986.

Cydmaea bimaculata Pascoe

On *Grevillea lanigera* A. Cunn. ex R. Br. (Proteaceae) at Canberra, ACT, 4. iii. 1986.

Cydmaea binotata Lea

On *Hakea sericea* Schrad. (Proteaceae) at Canberra, ACT, 4. iii. 1986.

Eniopea viridisquama Lea

Abundant on *Leptospermum juniperinum* Sm. (Myrtaceae) at Tidbinbilla near Canberra, ACT, 1. iii. 1986. Also on another *Leptospermum* sp. near Braidwood, NSW, 12. iv. 1986.

Erytenna consputa Pascoe

On *Hakea rostrata* F. Muell. ex Meissn. (Proteaceae) near Dunkeld, Vic., 7. xi. 1986.

Dicomada rufa Lea

Abundant on *Hakea microcarpa* R. Br. (Proteaceae) at Kiandra near Cooma, NSW (1500 m), 30. iii. 1986.

Storeus baeodontus Lea

On *Dodonaea cuneata* Sm. (Sapindaceae) at Dunkeld, Vic., 8. xi. 1986, and at Canberra, ACT, 10. xi. 1986.

Storeus majusculus Blackburn

Abundant on *Acmena smithii* (Poir.) Merrill et Perry (Myrtaceae) in different localities around Kiama, NSW, 8. ii. 1987.

Tranes internatus Pascoe and
Tranes lyterioides Pascoe

Both on *Macrozamia communis* L. Johnson (Zamiaceae) and immature stages of *T. internatus* are recorded from cones of this plant (Britton 1970). A large number of larvae, pupae, and freshly developed adults were found in a trunk of *Macrozamia communis* near Braidwood, NSW, 15. i. 1987. They are active at night and several specimens were caught flying at about 21.00 (Braidwood, NSW, 15. i. 1987). Larvae and freshly developed adults of *Tranes lyterioides* were found in the stem of the cones of *Macrozamia communis* at Shoalhaven Heads, NSW, 15. iii. 1987. The seeds were not attacked.

Baris niveodispersa Lea

On *Marsdenia rostrata* R. Br. (Asclepiadaceae) near Kiama, NSW, 15. iii. 1987.

Myctides barbatus Pascoe

Abundant inside and beneath fallen fruit of *Eugenia cormiflora* F. Muell. (Myrtaceae) near Mossman, Q, 5. x. 1986.

Psepholax lateripennis Lea

Newly emerged specimens were found under bark of a fallen tree of *Litsea reticulata* (Meisn.) F. Muell. (Lauraceae) near Nowra, NSW, 7. ii. 1987.

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